**IT Applications Unit 3, AOS 1, Online Communities**

Complete the following, from pgs 3-14

**Networks are classified according to below and we will study the following:**

1. **Network Categories: LAN, WAN**
2. **Network Architecture, client-server; peer-to-peer; internet peer-to-peer; intranet**
3. **Network communication standards**
4. **Network hardware and software**
5. **Transmission media**
6. **Network security**

**What is a network?**

1. Describe the role of a network. A network connects computers together so that they can share data.
2. What is groupware software? Provide an example. Allows multiple users to use the same files and uses real time to stream data.
3. Describe the nature of social networking sites. Social networking sites allows users to so they can share information.
4. What is meant by real time? Means there is no delay between sending and receiving a response.

**Advantages of networks**

Elaborate under each of the following advantages of networks:

1. Resource sharing
   1. Internet connection-
   2. Printing-
   3. Software-
   4. Other resources including network-attached storage (NAS) servers
      1. Define a NAS server

A NAS Server is a Network-Attached storage device that provides file based data storage to other devices on the network.

1. Remote Services
   1. Describe how a B2B network operates. A B2B network will often involve an extranet.
   2. What is an extranet? An extranet is a private network that operates using internet protocols and the public telephone system.
   3. What are the advantages of a B2B situation?
   4. Describe the nature of EFTPOS. Electronic funds transfer point of sale (EFTPOS) is a device by which sales transactions can be directly debited to a customer’s bank account at the point of sale through the use of a debit card.
2. Data and information sharing in organisations
   1. Outline how data and information sharing occurs through networks and how this is an advantage. Data and information sharing occurs through the network when there is information stored on a computer or database and can be access through the network if permission is granted. The advantage to it is that computers in the network can promptly access the data information promptly and it will still be accurate.
   2. What is meant by the process of synchronising data? Synchronising data means the data used by users can be manipulated so that everyone has the same data set that is up to date
   3. How does this prevent data duplication? Because the information on the server is constantly updated (synched) data duplicates are unlikely.
3. Facilitating communications
   1. How does networks facilitate communications?

Types of networks, p 8

**1 Network categories**

1. Local Area Network, (LAN)
   1. Describe the nature of a LAN. Local Area Network (LAN) is a network that connects computers and devices within a close geographical proximity, such as within an office building ,school or home.
   2. How has the advent of wireless technology changed the nature of the definition of a LAN? The advent of wireless technology has mean that computers that are located beyond the confines of a building may now take part of the LAN.
   3. What is a Node? Each computer or device on a LAN, is called a **Node.**
   4. How are LANS typically connected?
   5. Describe a wireless LAN.
2. Wide area network, (WAN)
   1. Describe the nature of a WAN including the transmission media.
   2. List the different categories of WANs
3. **Network architecture**
4. What is meant by network architecture?

Under each of the following three categories of network architecture answer the questions:

1. **Client-Server network**
   1. Describe the nature of this type of network.
   2. What is the role of a client?
   3. How does a server differ from an ordinary desktop computer?
   4. Explain what is meant by multi-tasking?
   5. Describe the nature of each of the following types of servers:
      1. File server
      2. Print server
      3. Database server
      4. Web server
      5. Domain name server
      6. Proxy server
      7. Backup server
      8. DHCP servers
      9. Active directory domain controller server
      10. Virtual server
2. **Peer-to-peer network**
   1. Describe the nature of this network.
   2. What are the limitations of this type of network?
   3. How does a simple home network operate?
3. **Internet peer-to-peer network**
   1. Describe the nature of this network.
   2. How does a user set up for this type of network?
   3. What are the risks associated with this type of network?
   4. What is BitTorrent?
   5. Complete the Think about IT, 1.5 activity on pg 13.
4. **Intranets**
   1. Define an intranet.
   2. List the benefits of an intranet.
   3. Why must an intranet reside behind a firewall?